

# **RISK MANAGEMENT BULLETIN**

## **BOILER AND PRESSURE VESSEL INSPECTION REQUIREMENTS**

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We would like to notify everyone of some inspection requirements for boilers and pressure vessels installed and operated in the State of Maine that may affect some of the buildings insured by Risk Management. This bulletin briefly covers some of the topics addressed in the law and rules, however, they should be reviewed to ensure all requirements are complied with.

Maine law requires all non exempt boilers and pressure vessels be registered and inspected in a manner determined by the Board of Boilers and Pressure Vessels. The Chief Boiler Inspector for the State of Maine is charged with the enforcement responsibilities of the Board. Here is some general information to assist you with understanding the State's and the Board's requirements.

Maine Law 32 MRSA 15102 lists boilers and pressure vessels that are exempt from the requirements of the Board. Objects in small residential housing/apartments or federal buildings are normally exempt. Any boiler or pressure vessel not exempt is required to comply with the requirements of the Board. In this bulletin we will try to list some of the various types of equipment that need to be inspected. If you are in doubt as to whether or not a boiler or pressure vessel needs inspection, you are encouraged to call the Board office for advice.

Boiler requirements are understood by most boiler operators but here is a brief review:

All boilers require an annual certificate inspection. All high pressure boilers require inspection. A high pressure boiler operates at a steam(vapor) pressure greater than 15 pounds per square inch gage(psig) or higher and also includes water(liquid) boilers that operate at a temperature higher than 250 degrees or a pressure higher than 160 psig.

Low pressure boilers that are used for purposes other than space heating require inspection. This would be a low pressure boiler that is used in a process (typically steam cooking) or some other high temperature operation such as part of a manufacturing activity.

Low pressure boilers used to heat schools or municipal owned buildings require inspection. Domestic hot water supply boilers and water heaters also require inspection if located in a school or municipal owned building. Smaller boilers and water heaters may be exempt from the annual inspection requirements, but must comply with the registration and installation requirements.

The requirements for pressure vessels are not as widely understood, please read this.

The pressure vessel inspection requirement has been in effect since July 15, 1998. Despite this requirement, few pressure vessels have been registered. Pressure vessels require a certificate inspection once every three years.

The rules and laws require the inspection and registration of any pressure vessel with an internal volume larger than 5 cubic feet (37.5 gallons) operating at a pressure greater than 15 PSIG and all pressure vessels regardless of size when operated at greater than 250 PSIG may require inspection and registration. Pressure vessels located in federal and small residential buildings are exempt. Additionally, vessels that contain liquid gases installed in Department of Transportation containers and vessels that contain low temperature liquids are also exempt.

Typical pressure vessels are air compressor tanks and hot water storage tanks larger than 120 gallons. Sterilizers, autoclaves, heat exchangers for refrigeration or air conditioning, water heaters with more than 200,000 BTU input are also included. In the past 6 years about 4000 pressure vessels have been registered and inspected. The Chief Boiler Inspector estimates that as of late 2006 there are at least 20,000 objects yet to be registered within the State of Maine.

These rules mean that just about any school, garage, workshop, laboratory, laundry, testing facility, facility where people live or reside, manufacturing facility, and the like has a boiler or pressure vessel that requires inspection. Title 32 MRSA 15120 of Maine law states that Authorized inspectors shall inspect the boilers and pressure vessels insured by their respective insurance companies. If Risk Management is your organization's insurance "company" or insurance resource then please be sure to report the location of all boilers and pressure vessels you know or think need to be inspected so that required inspections can be ordered and done in compliance with Maine's laws and rules.

**A list of typical Pressure Vessels which may require inspection in the State of Maine (this list is not all inclusive)**

<b>Agitator Tank</b>	<b>Digesters</b>	<b>Jacketed Steam</b>
<b>Air Aftercooler</b>	<b>Distillation Vessels</b>	<b>Vessel</b>
<b>Air Dryer</b>	<b>Dryer Roll</b>	<b>LNG Tank</b>
<b>Air Intercooler</b>	<b>Dye Kier</b>	<b>Nitrogen Tank</b>
<b>Air Oil Separator</b>	<b>Evaporator Tank</b>	<b>Oxygen Tank</b>
<b>Air Separator</b>	<b>Expansion Tank</b>	<b>Process Vessel</b>
<b>Air Tank</b>	<b>Feed Water Heater</b>	<b>Propane Tank</b>
<b>Ammonia Receiver</b>	<b>Filter Tank</b>	<b>Refrigerant Receiver</b>
<b>Autoclave or Sterilizer</b>	<b>Heat Exchanger</b>	<b>Retort</b>
<b>Blowdown Tank</b>	<b>Hot water Tank</b>	<b>Steam Chest</b>
<b>CO2 Tank</b>	<b>Hydraulic Accumulator</b>	<b>Steam Cooker</b>
<b>Coil Water Heaters</b>	<b>Hydrogen Tank</b>	<b>Steam Kettle</b>
<b>Condensate Return</b>	<b>Hydro-pneumatic Tank</b>	<b>Textile Cylinder Dryer</b>
<b>Tank</b>	<b>Isostatic Press</b>	<b>Vacuum Tank</b>
<b>Corrugator Roll</b>	<b>Cylinder</b>	<b>Vulcanizer</b>
<b>DA Tank or Deaerator</b>	<b>Jacketed Reactor</b>	<b>Water Softener</b>
<b>Tank</b>		<b>Yankee Dryer</b>

If in doubt about a boiler or pressure vessel, contact Risk Management or the state's chief boiler inspector.